Features of the 3 SDI Alternatives

Alternative Features	1. Subteam 1 Barrier Alternative	2. Subteam 4 Barrier Alternative	3. DWR/USBR 4 Barrier Alternative
A. Component: New Northern Clifton Court Forebay Intake, Fish Screen, and Dredging for Conveyance:			
A1. New Northern Intake and Fish Screen:		same as 1	same as 1
	A new, screened intake to Clifton Court Forebay will be constructed on Byron Tract south of the Los Vaqueros screen on Old River. Water will be siphoned under Italian Slough into the north end of the forebay.	same as 1	same as 1
	The intake and screen will be constructed to divert a maximum of 10,300 cfs (SWP only) or 15,000 cfs (SWP and CVP combined) while meeting an approach velocity criteria of 0.33 f/s.	same as 1	The intake and screen will be constructed to divert a maximum of 10,300 cfs (SWP only) or 15,000 cfs (SWP and CVP combined) while meeting an approach velocity criteria of **0.20 f/s**.
A2. Intake Operations:			
	During the February through August period, pumping will be limited to the extent needed to keep intake velocities at or below an approach velocity of 0.2 f/s.	same as 1	same as 1
	Approach velocity criteria data will be reported daily and included in the monitoring plan (see Component O: Monitoring).	same as 1	same as 1
	All water exported from the South Delta will be screened by the end of Stage 1. The most appropriate configuration of intakes will be determined by continuing research and analysis.	same as 1	same as 1
B. Component: SWP and CVP Fish Salvage Facilities and CVP Screens			

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B1. Enhanced Salvage Data Processing and Reporting at both CVP and SWP Export Facilities			
	Salvage procedures, data processing, and reporting will be done in coordination with fishery agencies.	same as 1	same as 1
B1.1. Loss Estimate Revision			
	(1) Revised formulas for loss estimates will be developed that are acceptable to the fish and wildlife agencies using appropriate studies to determine new prescreen loss rates, changed predation effects, and any other changes that could affect take estimates for the SWP and mitigation funding for agreements such as the Four Pumps Agreement.	same as 1	same as 1
B1.2. Fish Salvage Facilities Design and Operation			
	New fish salvage facilities, acceptable to the fish and wildlife agencies, will be constructed. Before operating the new CVP facilities or new SWP intake, DWR and USBR will also enter into an Operations and Maintenance agreement with the DFG that is acceptable to the fish and wildlife agencies, and that includes a fish salvage plan.	same as 1	same as 1
F. Component: Improve Water Quality in Lower San Joaquin River			
	Evaluate/Implement release of TDS buildup during Pulse Flow Period by contributing to a feasibility study to evaluate recirculation benefits and impacts.	same as 1	same as 1

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	A pilot study will be funded in the San Joaquin Valley to evaluate integrated on-farm management of selenium. Based on the results of that study, contributions to full implementation of the program will be made.	same as 1	same as 1
A. Dredging in Old River			
	Old River north of the new intake will be dredged. Dredging will be limited to the middle of the channel and will avoid, to the extent possible, areas that are < 3 m at MLW. Any dredging in areas < 3 m at MLW will be offset by restoring additional tidal perennial aquatic habitat beyond the ERPP target acreages at the rate of 2 to 1. Dredging will be confined to the period of August 1 through October 14.	same as 1	Same as 1 except dredging limited to middle 2/3 section of channel
	Any terrestrial habitat used as a site for dredge spoil storage will be offset by restoring additional wildlife friendly agriculture or seasonal wetland beyond the ERPP target acreages at the rate of 2 to 1.	same as 1	same. Note that dredging will likely be done with clamshell, with beneficial reuse of material throughout Delta.
C2. SWP and CVP operations will be modified to allow Joint Point of Diversion.			
	JPOD will be implemented using an approach acceptable to the Fish and Wildlife agencies.	same as 1	same as 1
C3. SWP operations prior to completion of new intake and fish screen			
	SWP operations will be modified consistent with the operating criteria in this package, average daily exports of up to 8,500 cfs through the existing radial gate intake to Clifton Court Forebay, in conjunction with ecosystem restoration.	same as 1	Extend time period in which 8500 cfs can be pumped throughout year. If barriers not in place, limit diversion increase to 1/3 of SJR per Corps notice. Comply with existing Delta stds.

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	The increased diversion capability in February and March will not be used unless the previous day's QWEST is positive and is calculated to remain positive during the current day's increased diversions.	same as 1	Extend time period in which 8500 cfs can be pumped throughout year. If barriers not in place, limit diversion increase to 1/3 of SJR per Corps notice. Comply with existing Delta stds.
	The increased diversion capability in February will be limited so that the increased diversions do not result in a daily E/I ratio of greater than 35 percent.	same as 1	Apply this criterion only outside the current Corps Public Notice time window of Dec 15-Mar 15
	The increased diversion capability in March will be limited so that, except in wet and above normal years, the increased diversions do not result in a daily E/I ratio of greater than 30 percent.	same as 1	Apply this criterion only outside the current Corps Public Notice time window of Dec 15-Mar 15
	In April through June the increased diversion capability will not be used and exports will be restricted to the presently permitted pumping levels.	same as 1	same as 1
	Increased export capacity will be ramped up in July so that increased exports beyond currently allowed levels are less than 1,000 cfs in the first ten days of July, and 2,000 cfs in the second ten days of July.	same as 1	?
C4. SWP operations after completion of new intake and fish screen and approval by the fish and wildlife agencies			
	SWP operations will be allowed to export, consistent with the above operating criteria described for operations before completion of the new intake, an average daily amount of up to 10,300 cfs through the new intake and screen into Clifton Court Forebay.	same as 1	?

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E. Component: Head of Old River Fish Control Structure			
	The Head of Old River (HOR) Fish Control Structure of consistent design will be operated through Stage 1 (per fish and wildlife agencies). Continue fishery monitoring, reevaluate, and modify operations of structure as appropriate.	same as 1	Construct permanent, operable barrier as soon as feasible but continue with temporary barrier until then
E1. Operations:			
	HOR Fish Control Structure operation in the spring may, at the fish and wildlife agencies' discretion and subject to San Joaquin River flow conditions, begin as early as April 1 and continue operation through June 15.	same as 1	HOR Fish Control Structure operation in the spring may, at the fish and wildlife agencies' discretion and subject to San Joaquin River flow conditions, begin as early as April 1 and continue operation through **May 30**.
	Fall operation of the HOR Fish Control Structure will, at the fish and wildlife agencies' discretion and subject to San Joaquin River flow conditions, begin in September and continue through November 30.	same as 1	Fall operation of the HOR Fish Control Structure will, at the fish and wildlife agencies' discretion and subject to San Joaquin River flow conditions, begin **October 1** and and continue through November 30.
M2. SWP/CVP Intertie			
	A 400 cfs intertie will be constructed downstream of the export pumps between the CVP Delta-Mendota Canal and the SWP California Aqueduct. Its use will be at times and for purposes acceptable to the fish and wildlife agencies	same as 1	Use should be at discretion of USBR and DWR since this intertie simply compensates for deterioration in DMC.
H. Component: Agricultural and Wetland Diversion Screening			
	Annually, an additional $500,000 in 1999 dollars for the installation of new screens will be provided to implement the south Delta portion of a Delta Screening Program. Additional funding needed to properly operate and maintain those screens will also be provided.	same as 1	same as 1

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	(1) In addition, all agricultural diversions in Grant Line Canal will be screened.	same as 1	same
	(1)I. Component: Aquatic Habitat:		
	In order to offset the adverse effects of implementing the SDI element of Stage 1 in the South Delta and to begin implementation of the ERPP, contiguous expanses of tidal wetlands will be identified, protected, and increased in the Lower San Joaquin River and South Delta area.	same as 1	Mitigation requirements need to be supported by appropriate analysis
	1,000 ac (200 *) of tidal emergent wetland.	same as 1	
	500 ac (100 *) of tidal perennial aquatic habitat.	same as 1	
	50 ac (25 *) of Shaded Riverine Aquatic Habitat.	same as 1	
	*- Acreages are in addition to acreages described for the Aquatic Habitat Component and are not included in the ERPP. Acreages not otherwise designated are not additive to the ERPP and are simply that part of the ERPP that will be implemented as part of the SDI element of Stage 1.	same as 1	
Component: Terrestrial Habitat		same as 1	
	In the Lower San Joaquin River and South Delta area contiguous expanses of wetlands will be identified, protected, and increased through restoration. Large expanses of terrestrial habitat will be restored through land acquisition or easements.*	same as 1	same
	1,000 ac of seasonal wetland.	same as 1	same as 1
	500 of riparian (half managed for the riparian brush rabbit).	same as 1	same as 1
	1,000 acres of wildlife friendly agriculture.	same as 1	same as 1
	*- Acreages are not additive to the ERPP and are simply that part of the ERPP that will be implemented as part of the SDI element of Stage 1.	same as 1	same as 1

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O. Component: Monitoring:			
	Fishery monitoring shall be increased in order to guide the use of the flexibility associated with the increased export capacity.	same as 1	same as 1
	An Adult Salmon Passage Evaluation will be conducted to determine if adult salmon are found to be delayed or blocked by the flow or fish control structures. If found mitigation measures will be developed and implemented.	same as 1	same as 1
	Report daily approach velocity criteria data.	same as 1	same as 1
F. Component: Water Quality:			
	DO Management in San Joaquin River in vicinity of Stockton. Within the Stockton turning basin and west in the San Joaquin River, increased operations of the existing bubbler and the possible installation of additional aeration systems to increase DO levels to acceptable levels in the San Joaquin River and within the Stockton turning basin.	same as 1	Appropriate measures to improve DO to be determined by Stage 1 study, supported by stakeholder collaboration
Consolidation, Extension, and Screening of Agricultural Diversions as appropriate			
	($2 million in 1999 $'s per year). Any increased operational costs of pumping to lift water will fall on DWR.	same as 1	Cost allocation policy issue is unresolved
	Operation and Maintenance Team funding for agricultural diversions in place by 2001.	same as 1	same as 1
	Maintenance Dredging as appropriate.	same as 1	same as 1
	South Delta ERPP Acreages constructed per year as follows:		
	286 ac. of tidal emergent wetland,	same as 1	same as 1
	143 ac. of tidal perennial aquatic habitat,	same as 1	same as 1
	14 ac. SRA habitat.	same as 1	same as 1

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	SJQ River & Tributaries Management for WQ standards within SDWA service area.	Continue with existing operational approach	Continue with existing operational approach
	Accord and AFRP Delta Actions	same as 1	same as 1
	Phased 8,500 cfs diversions when species of concern not present provided fish and wildlife protections identified above are concurrently implemented.	same as 1	same as 1
Component: Flow Control Structures			
	Phased Removal of Temporary Flow Control Structures by year 2003 with Channel Dredging as required.	The Flow Control Structures will be constructed as "operable" structures. The Grant Line Canal Flow Control Structure will be constructed with an inflatable rubber dam and stop logs. Other flow control structures will either be inflatable rubber dams or operable radial gates. Construction methods will avoid or minimize impacts to fish and wildlife. Dredging impacts will be mitigated.	same as 2
Operations:			
	n/a	Middle River (MR) Flow Control Structure will only be operated from April 15 through October 31.	same as 2
	n/a		
	n/a	Old River at Tracy (ORT) Flow Control Structure will commence no earlier than April 15 and will cease by October 31.	same as 2
	n/a		
	n/a	The Grant Line Canal (GLC) Flow Control Structure operation will be limited to the period of August 1 through October 31. If operations occur prior to September 1 it will be for no more than two days in any seven day period.	Prefer operation from June, but if this is a concern for smelt, say 8 days in June, full operation for rest of season. Closed no more than 5 hours per day, on lowest portions of tide.
Other Features:			
		Irrigation intakes will be extended and Grant Line Canal dredged as needed.	same as 2

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		Additional pumping costs incurred due to extended irrigation intakes will be provided by CALFED.	Policy issue of cost allocation for increased pumping cost unresolved.
		An operation coordination team (OCT) will be formed and include the fish and wildlife agencies.	same as 2
Monitoring			
	Monitoring program for temporary structures will continue until they are phased out.	Monitoring of the Flow Control Structures and impacts on fish by the DFG, USFWS, and NMFS will take place, effects on stage will be assessed by DWR, effects on circulation and water quality will be measured by DWR, DFG, and USGS, and San Joaquin flows will be measured by USBR.	same as 2